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Flight and Operational Medicine Clinic (FOMC) Task Process Mapping

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Technical Report

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14. ABSTRACT This report contains the workflow analysis artifacts derived from a front-end analysis (FEA) of the Air Force Flight and Operational Medicine Clinic (FOMC). The primary methods of the FEA included workflow analysis, process mapping, and process redesign. The FEA methodology was executed using a 3-phased approach. The first phase consisted of a series of technical meetings with FOMC subject matter experts to develop baseline workflows. The second phase comprised site visits to a representative sample of FOMCs to identify and document the “as is” workflows and elicit user feedback regarding their tasks, processes, and interaction with current health IT systems. The third phase utilized a qualitative analysis of the FOMC baseline and “as is” workflows to reengineer optimized “to be” workflows to improve clinic operations and identity requirements for an enhanced Electronic Health Record system.					
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EXECUTIVE SUMMARY

This technical document describes the workflow analysis, led by the 711th Human Performance Wing, Human Systems Integration Directorate (711 HPW/HP), of the Air Force's (AF) Flight and Operational Medicine Clinics (FOMC), with respect to the clinical benefits of an improved workflow and enhanced Electronic Health Record (EHR). For the FOMC, it is critically important that its workflows be addressed, given the potential for unique attributes not routinely shared across other health systems. This project supports contributions to the survivability of the war fighter by demonstrating that service members will benefit from the improved care coordination that will be provided by a replacement EHR. Care coordination amongst service members' providers is critical to reduce preventable harms and fatalities in healthcare settings. Clinical improvements driven by EHR will ultimately improve the health of the warfighter by reducing the susceptibility and vulnerability to illness, improving injury prevention, and improving return-to-duty after injury. The improved EHR and workflow allows for better case management and reduced instances where the warfighter would return to duty status or even deploy prematurely. In understanding the benefits for personnel survivability, SURVIAC developed baseline and observed workflows to determine the inefficiencies affecting clinical care.

INTRODUCTION

The Department of Defense (DoD) Military Health System is engaged in efforts to acquire a replacement to its legacy EHR system known as the Armed Forces Health Longitudinal Technology Application (AHLTA). The 711 HPW/HP is supporting AME leadership and the AF/SG6 (Air Force Medical Support Agency, Office of the Chief Information Officer) in accomplishing a front-end analysis (FEA) of the medical system comprised of the personnel, health Information Technology (IT), and policies that are the functional instantiation of a FOMC. The purpose of the FEA was to understand the clinic staff (i.e., the users), their needs in accomplishing the clinic's mission, and the context-specific demands of the work situation. The methodology for conducting the analysis was a three phase approach. The first phase consisted of a series of technical meetings with SMEs to obtain baseline "as-is" workflows. In the second phase, the team completed a series of site visits to a representative sample of Air Force FOMCs to identify and document each clinic's direct care workflows and elicit user feedback regarding their tasks, processes, and interaction with the current health IT systems. In the third phase, SURVIAC completed a qualitative analysis of the FOMC baseline and observed workflows to develop optimized re-engineered workflows to improve clinic operations and identify requirements for an enhanced EHR.

RESULTS OF ANALYSIS

Based on the Phase I document review and SME technical meetings, seven workflows were identified for detailed analysis: Initial Flying Class (IFC), Fly Preventive Health Assessment (Fly - PHA), Aeromedical Waiver, Profile 469 Duty Limiting Restrictions,

Occupational Health Medical Surveillance Exam, Personnel Reliability Program (PRP) Certification / Administrative Qualification, and PRP PHA. These workflows represent labor intensive processes critical to the FOMC mission—that is, they are the primary value producing workflows. SURVIAC observed the seven primary workflows at six clinics and identified waste and variations amongst the clinics and workflows. Four major wastes were identified across multiple workflows: Over-processing, over-production, waiting, and non-utilized staff or confusion.

The SURVIAC re-engineered workflows illustrate how the streamlined processes supported by an enhanced EHR can increase clinical benefits for warfighters, thus reducing the warfighters' susceptibility and vulnerability to illness, improving performance and thereby reducing vulnerability to injury, and contributing to resilience that improves return-to-duty after injury. Other areas the team considered when redesigning the workflows included: smoothing the flow of the clinic and patients; minimizing handoffs between staff and other departments, in order to prevent the patient from getting lost in the shuffle or staff being confused about what task is taking place with a particular patient; minimizing confusion within the clinics, evident by the lack of training in some areas, unclear assignments (how to utilize the staff the clinic has and how to best assign staff for best patient flow); and poor communication. The seven primary FOMC workflows were consolidated into two re-engineered workflows: Pre-placement/Periodic Occupational Health Assessment and Impairment/Fitness for Duty. The workflows were designed around a patient-centered philosophy with occupational health services delivered using teams in which members practice at the maximum scope of their training and/or license. These teams differ significantly from the legacy FOMC in the utilization of medical technicians, nurses, and physician assistants to accomplish the majority of the tasks; physician level tasks are few and primarily involve application of clinical judgment.

Pre-placement/Periodic Occupational Health Assessment Workflow

The Pre-placement/Periodic Occupational Health Assessment workflow makes heavy use of an enhanced EHR to plan and program clinical work as well as facilitate communications among team members and the examinee. All tasks shown in the process map are not required for every type of occupational exam; however, rather than create unique workflows, differences are addressed for any particular exam by considering the unnecessary tasks as still existing in the workflow, albeit with a null value assigned to them. This model allows a single exam rules matrix to drive a single workflow that is mapped to a single team whose members have consistent roles.

Impairment/Fitness for Duty Workflow

The Impairment/Fitness for Duty workflow utilizes concepts and terminology derived from the Americans with Disabilities Act, such as temporary and permanent limitations, impairment versus disability, and fitness for duty evaluations and accommodation. These concepts and terms provide a means for consolidating several workflows dealing with work limitations in different sub-populations (i.e., service members, aviation special duty personnel, and civilian employees) into a single workflow.

CONCLUSIONS, RECOMMENDATIONS, AND STATUS

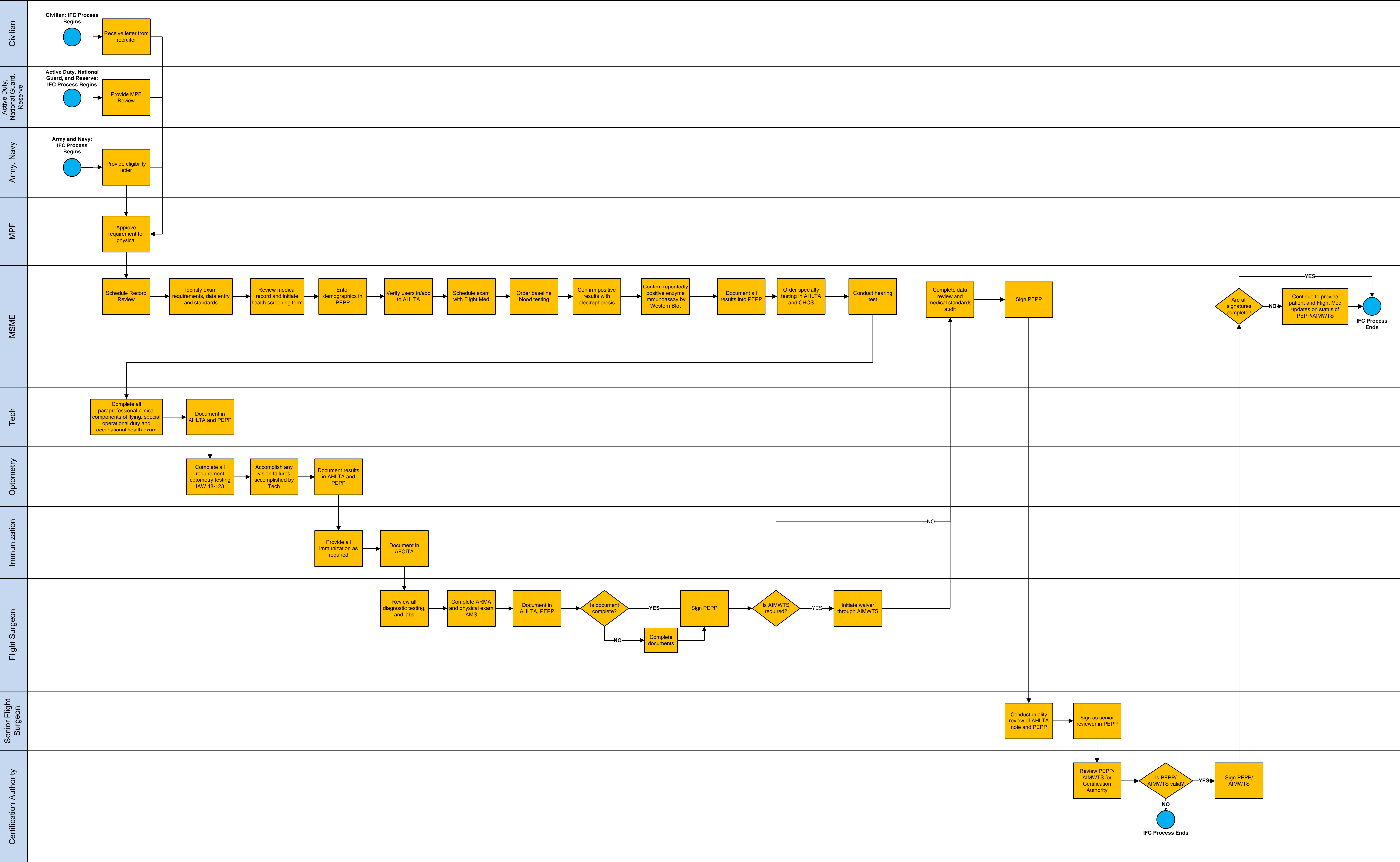
The team developed re-engineered FOMC workflows followed by conclusions and recommendations. The recommendations systematically address the latent failures driving waste in the current “as is” FOMC workflows. Enterprise-level leaders will need to holistically deal with these issues as part of implementing the re-engineered workflows.

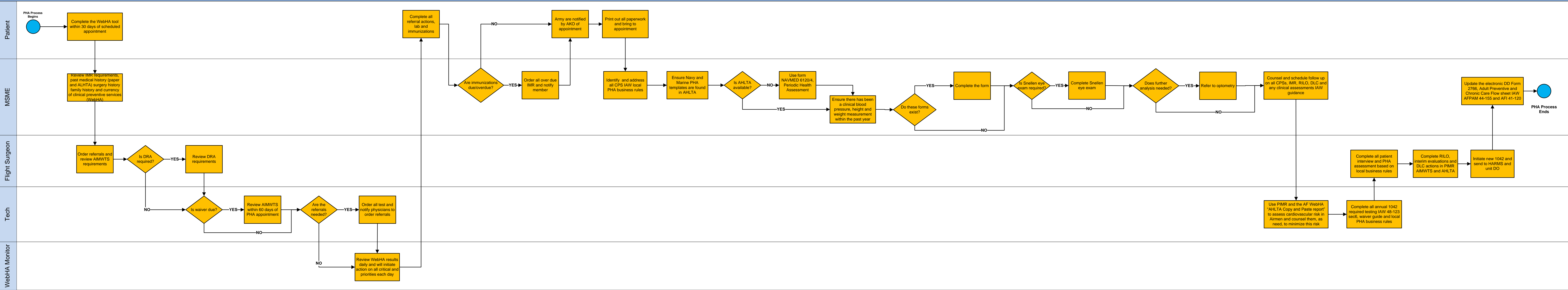
After gathering the information from the questionnaires, observations and stakeholder research at each site visit, the information will be compiled and analyzed. The findings will be used to validate and/or improve the future state re-engineered workflows and to create recommendations for improvements to FOMC operations.

This technical document describes the workflow analysis of the AF FOMCs with respect to the clinical benefits of an improved workflow and enhanced EHR. In understanding the benefits for personnel survivability, SURVIAC developed baseline and observed workflows to determine the inefficiencies affecting clinical care.

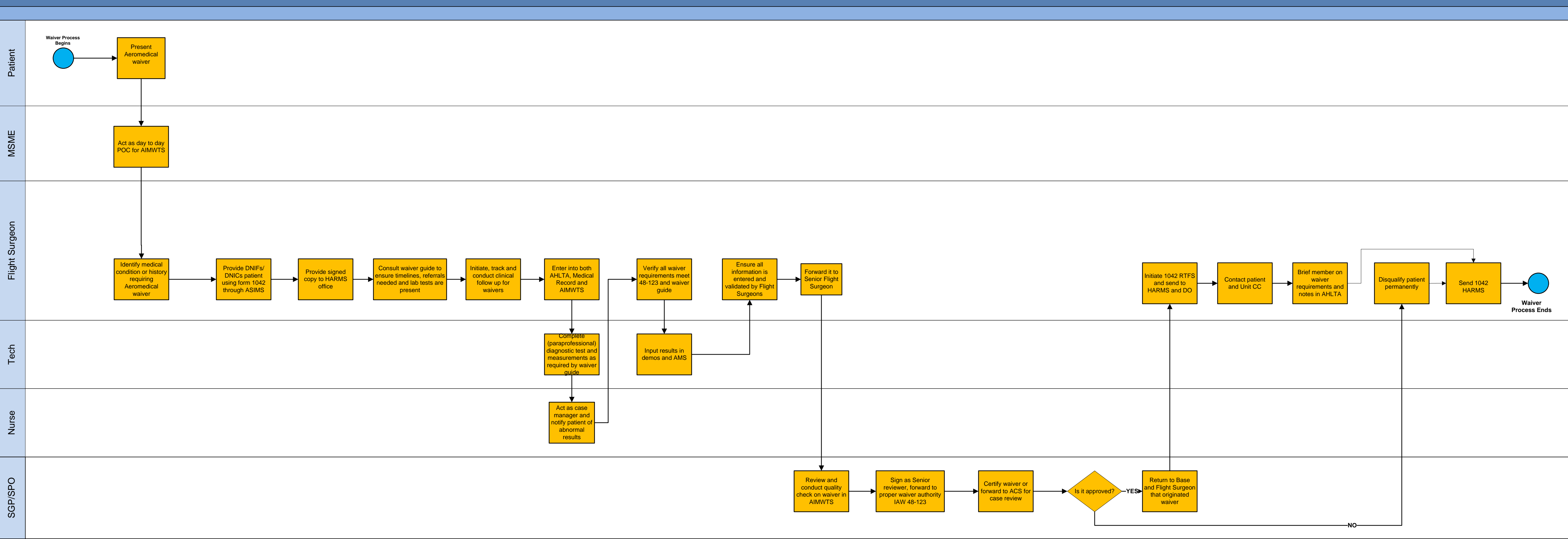
The attached workflows demonstrate that service members can benefit from potential clinical improvements driven by an enhanced EHR - ultimately improving the health of the warfighter by reducing the susceptibility and vulnerability to illness, improving performance and thereby reducing vulnerability to injury, and contributing to resilience that improves return-to-duty after injury.

Changes in primary FOMC processes were identified which will result in improved quality, increased speed and efficiency of care, simplification of processes for staff members and patients alike, and improved health outcomes. These improvements, along with the enhanced EHR system, will have a significant impact on the health delivery to the warfighter. Quality of care and standardized processes are a direct contributor to survivability of ill and injured military members, and, particularly with respect to preventing illness and injury, contributes to the survivability of all military systems. It is SURVIAC’s recommendation that all FOMC clinics implement the re-engineered workflows and acquire an enhanced EHR system.

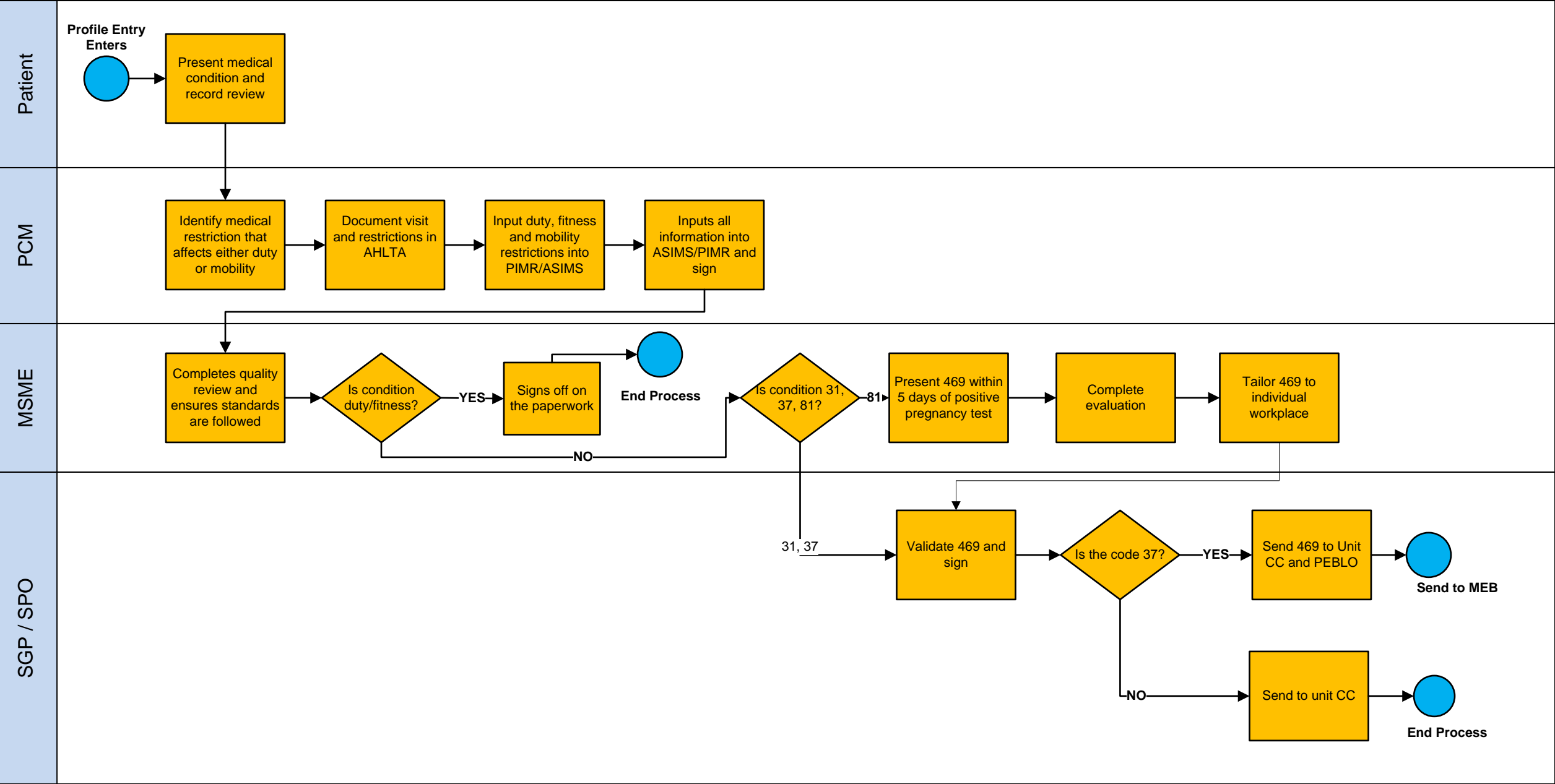


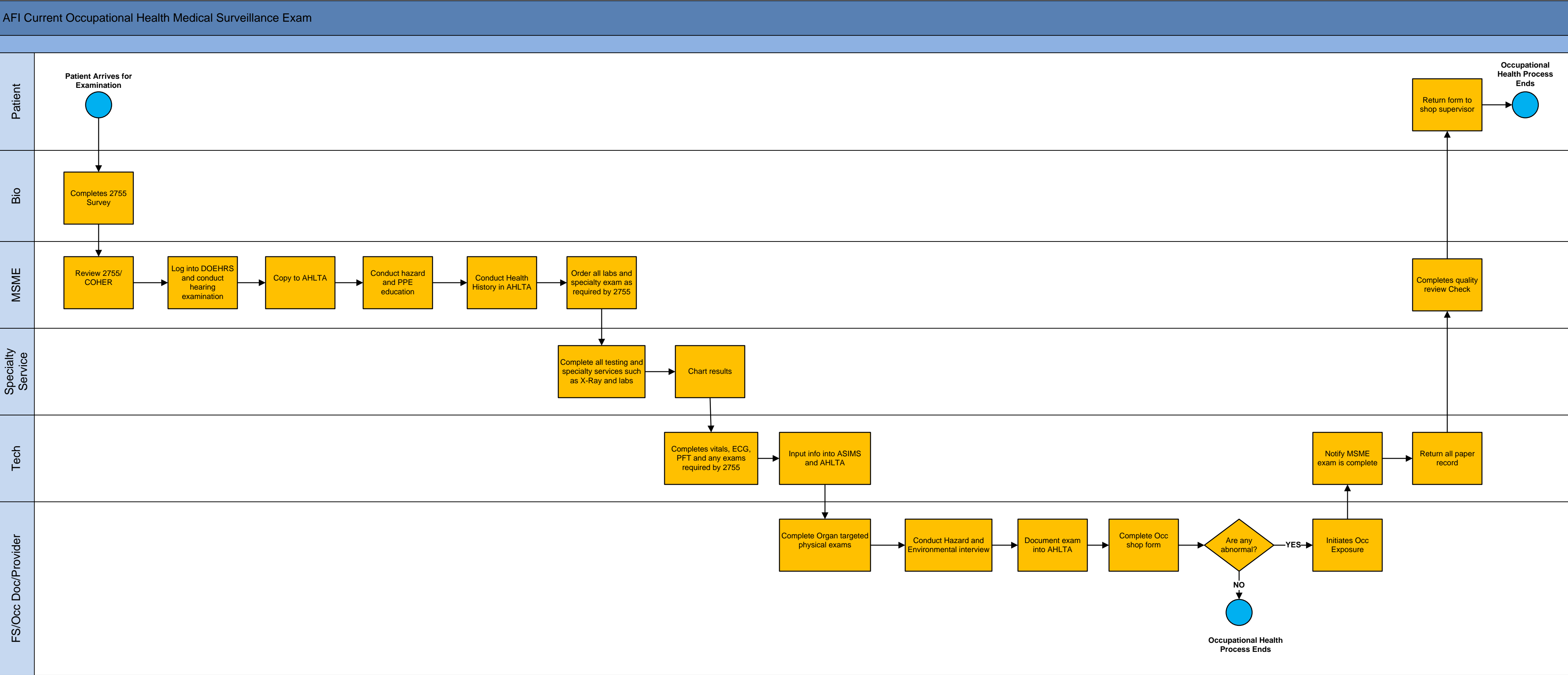


AFI Current Waiver Process

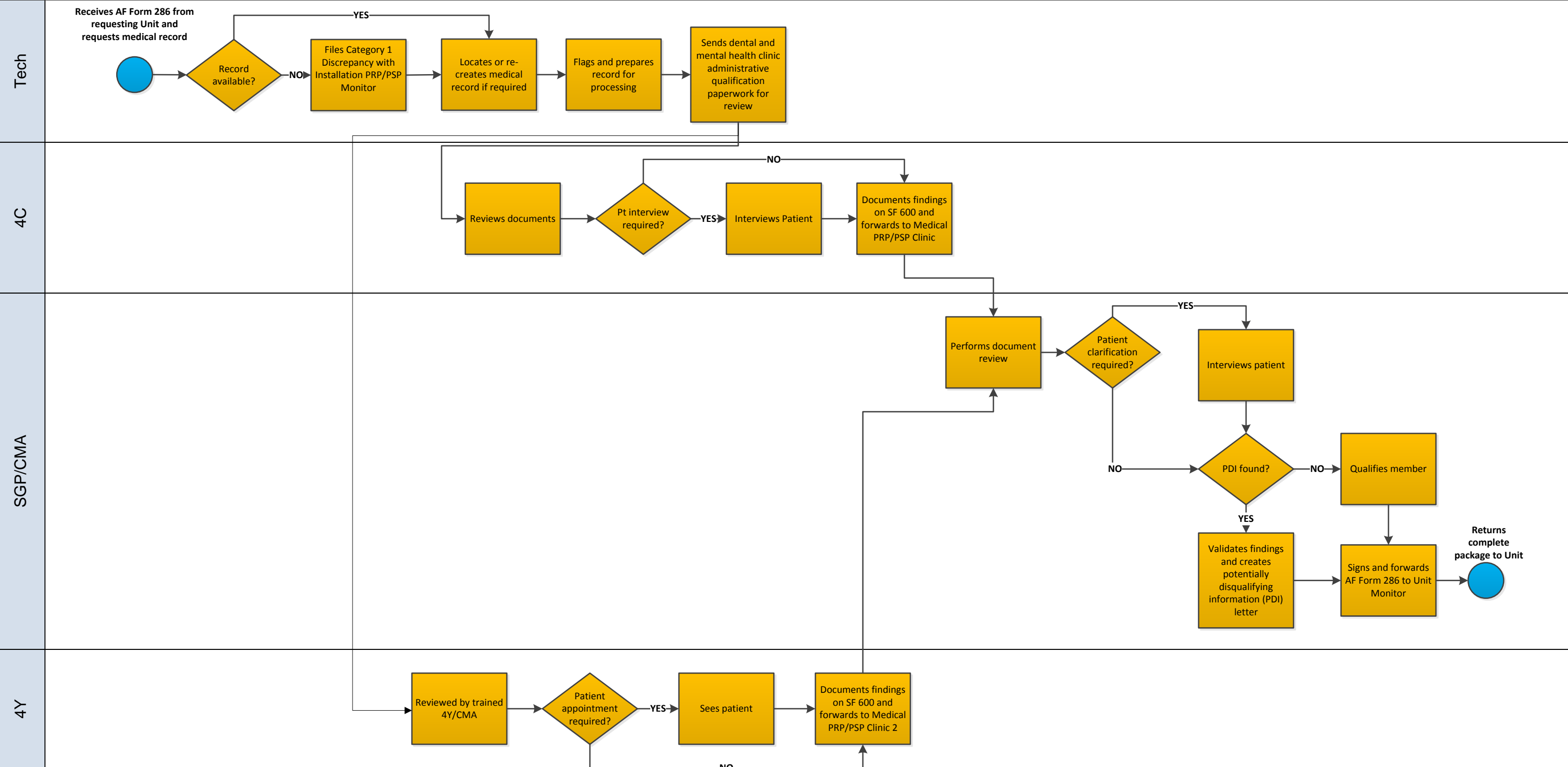


AFI Current Profile 469 Process



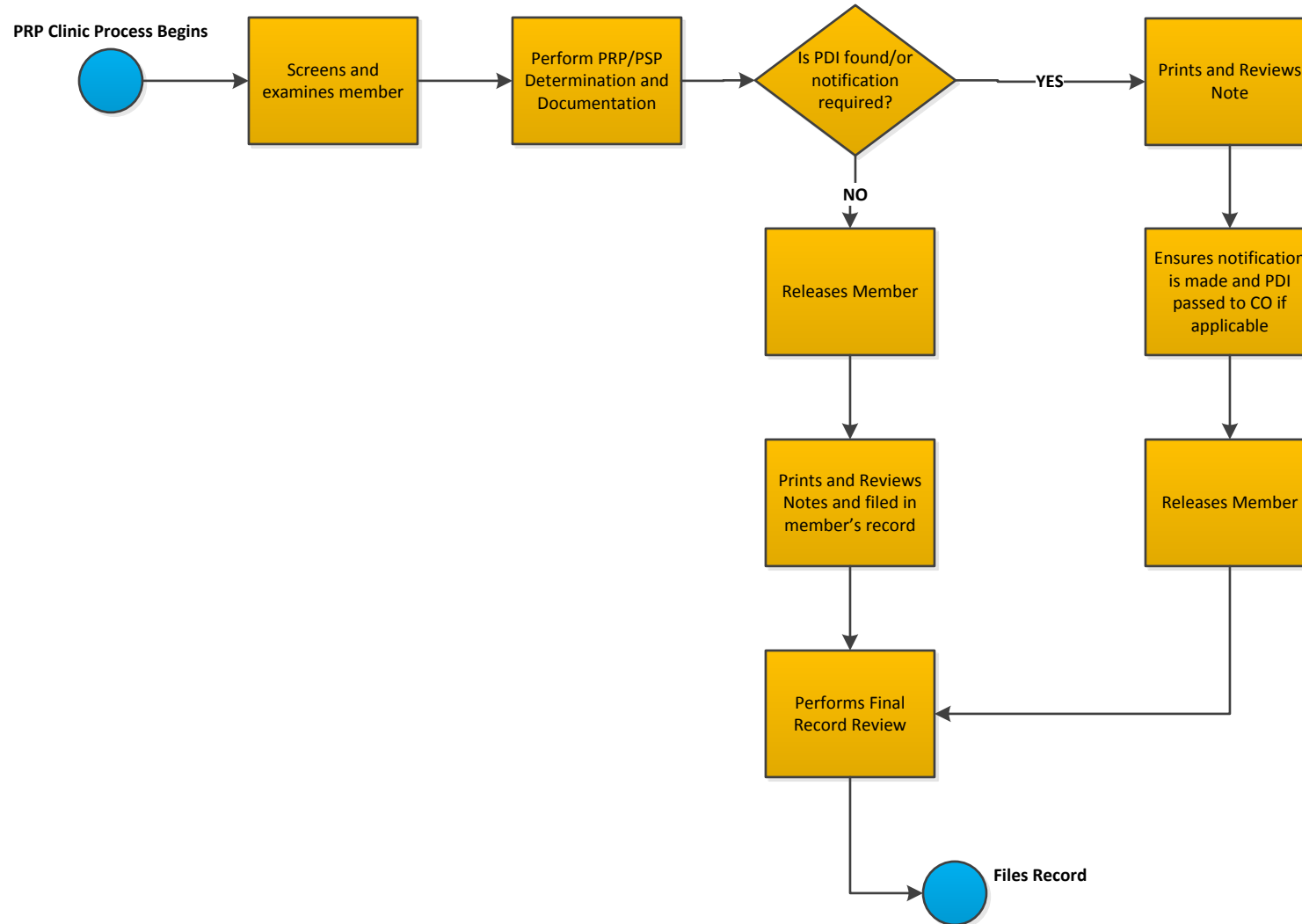


AFI Current - Personnel Reliability Program (PRP) – Certification/Administrative Qualification



AFI Current - Personnel Reliability Program (PRP) – Medical Care within PRP/PSP Clinic

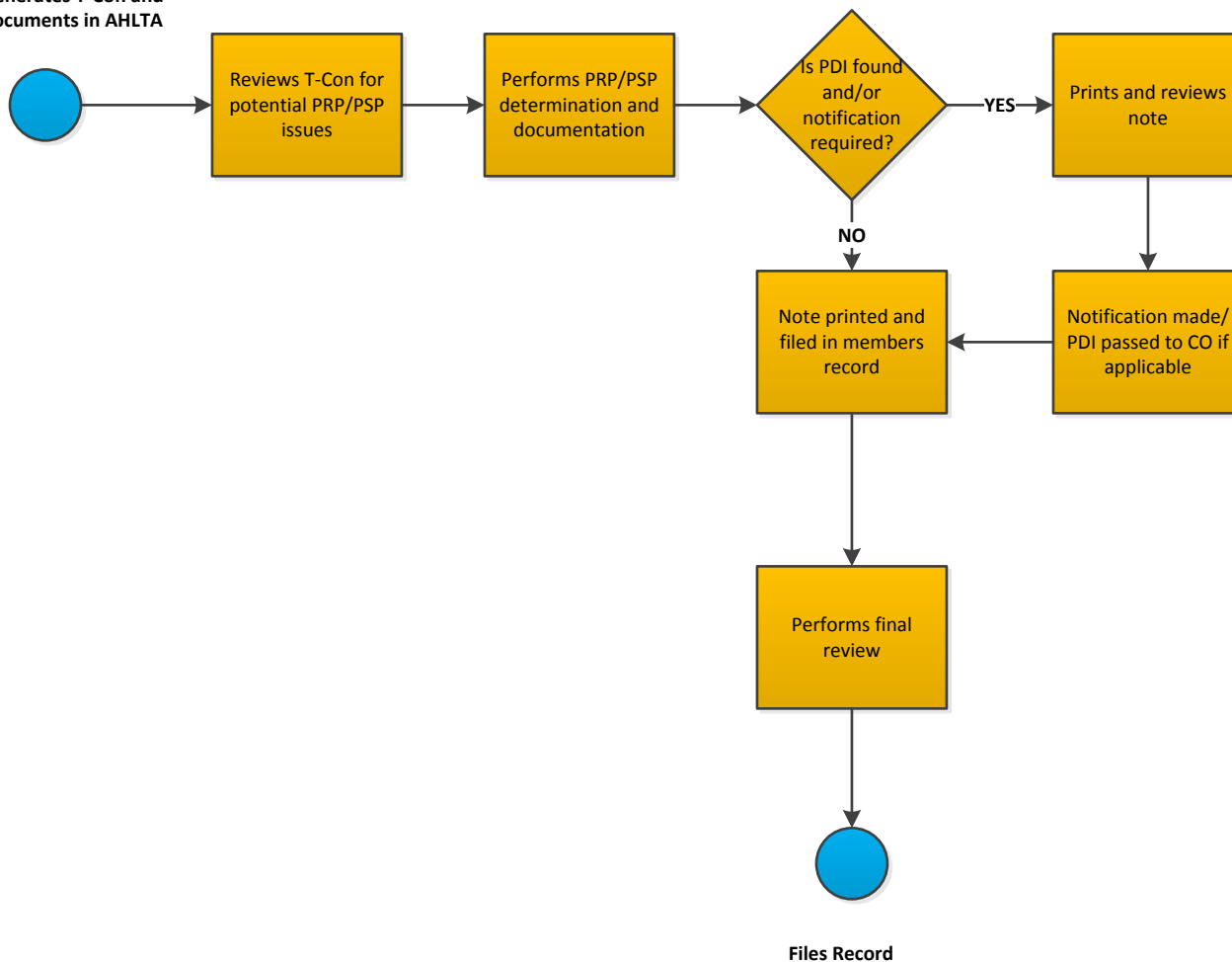
SGP/CMA



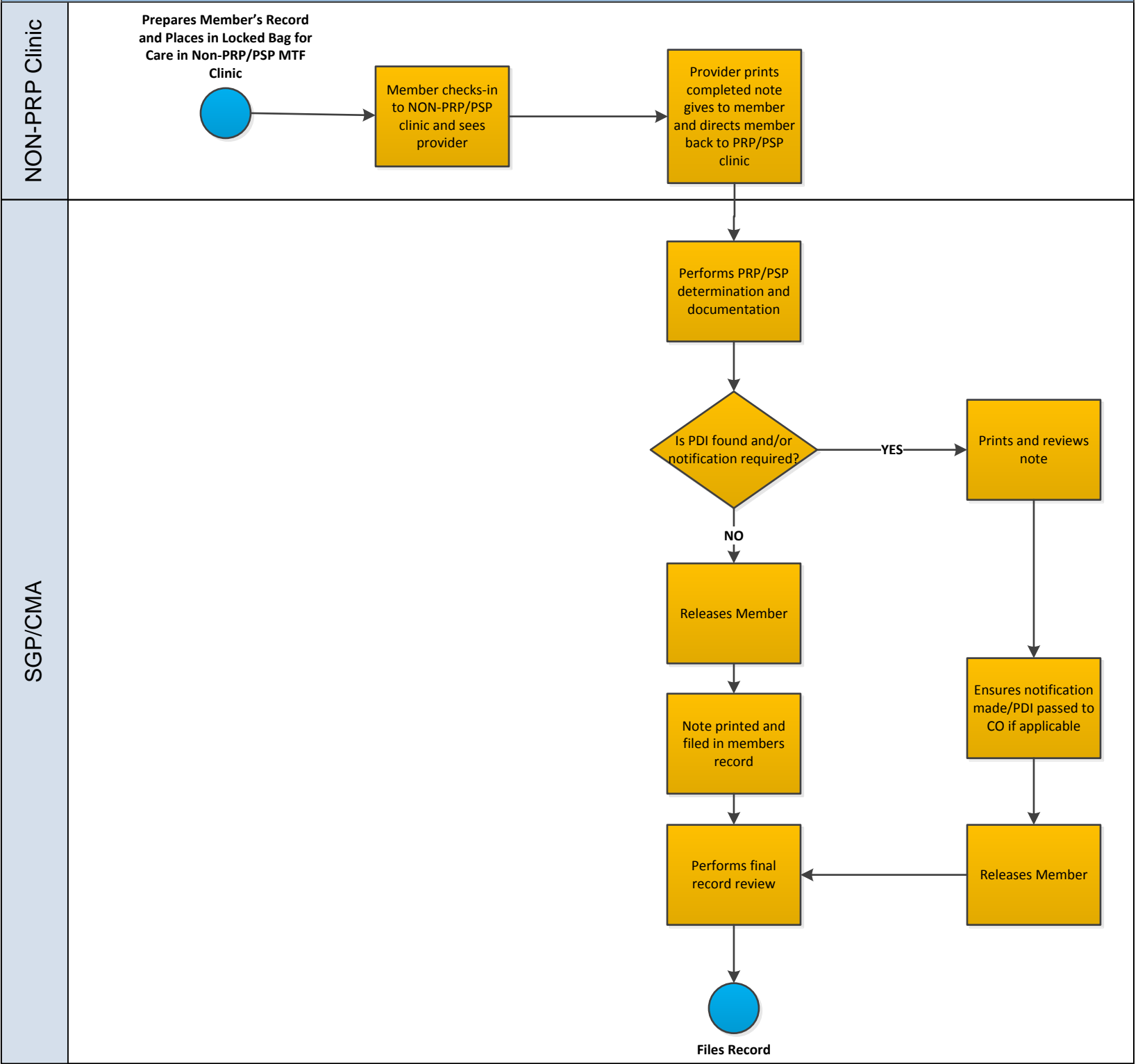
AFI Current - Personnel Reliability Program (PRP) – Telephone Consults

SGP/CMA

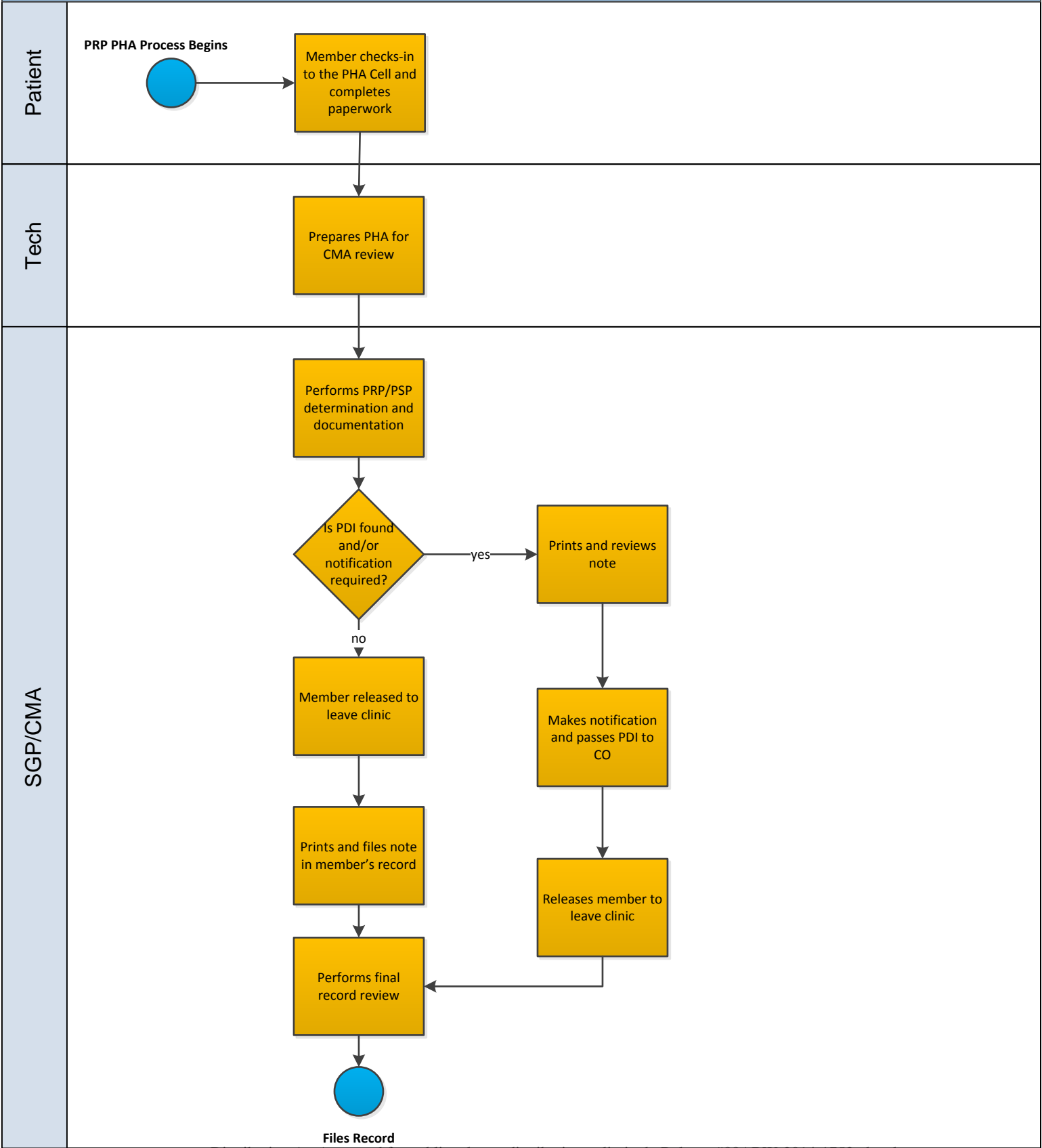
T-Con Process Begins
Generates T-Con and
documents in AHLTA

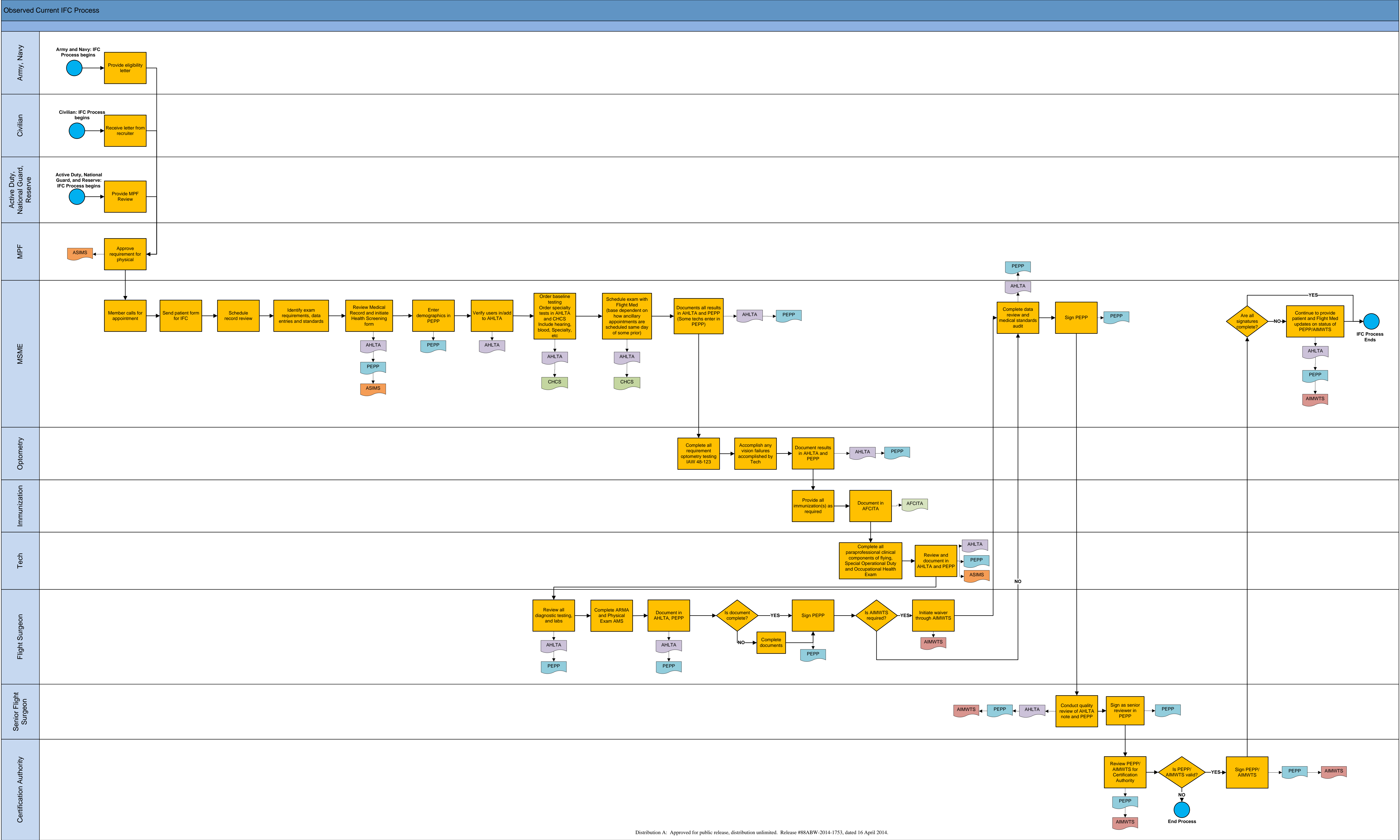


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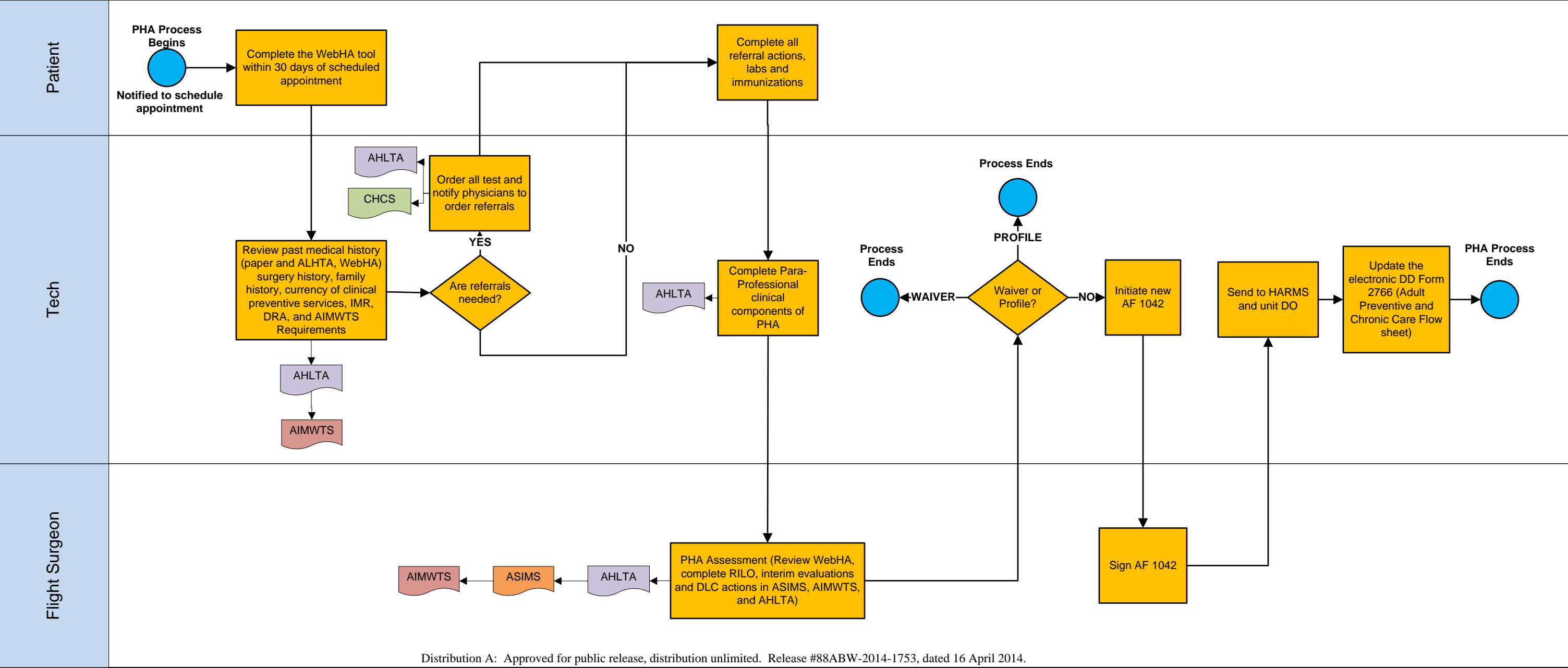


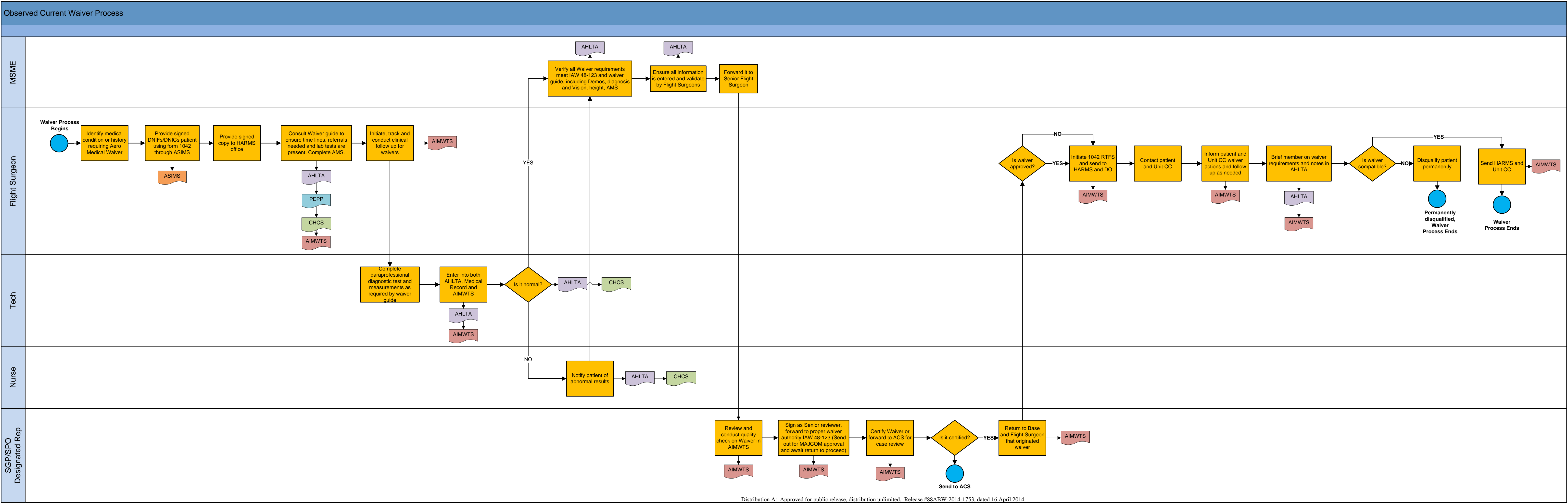
AFI Current - Personnel Reliability Program (PRP) – PHA Review



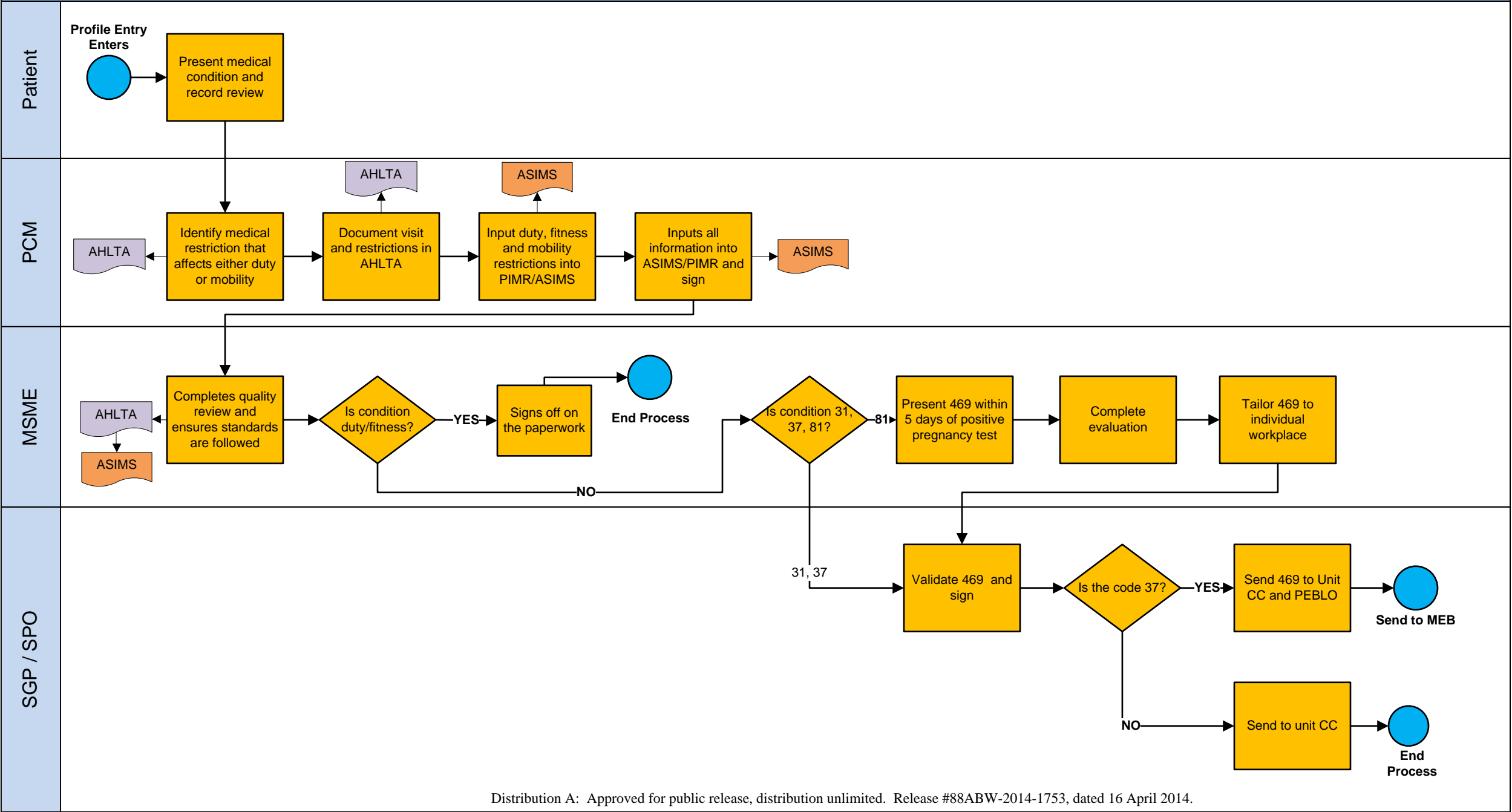


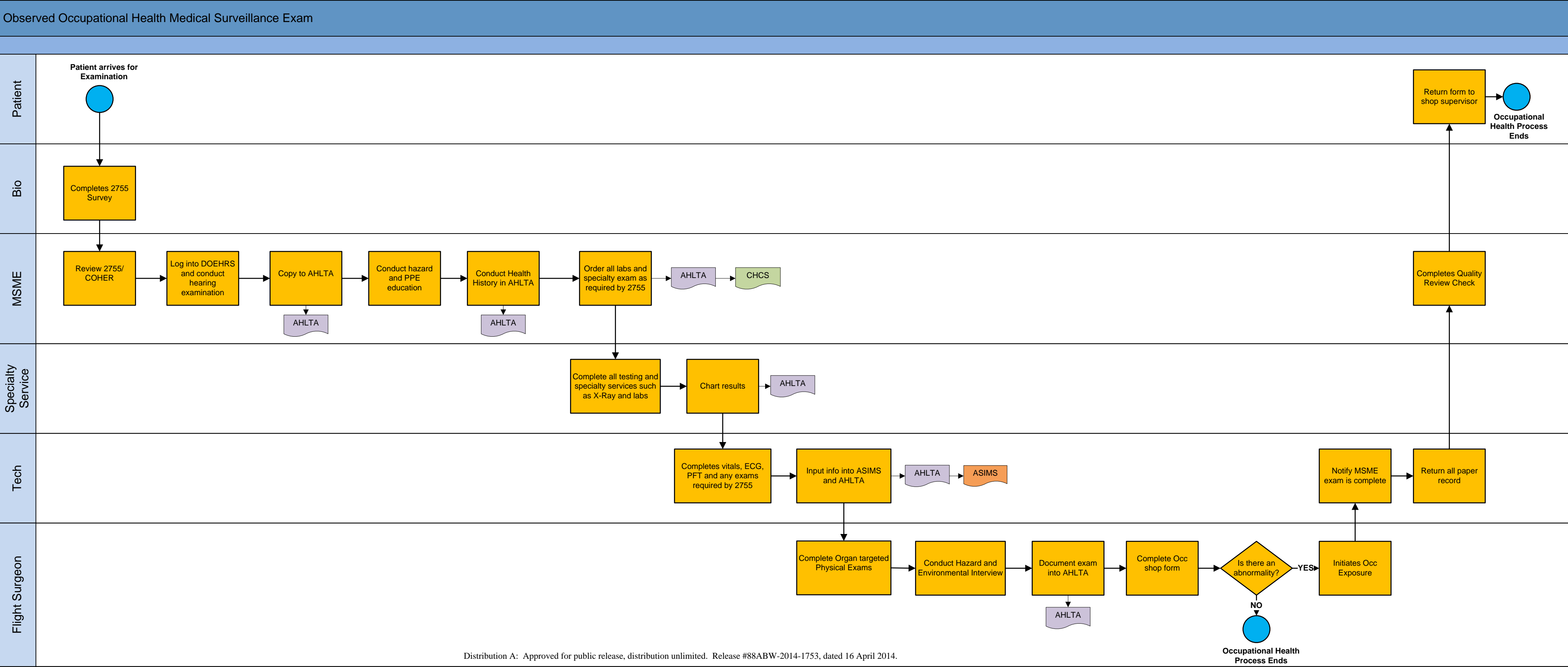
Observed Current Fly PHA Process



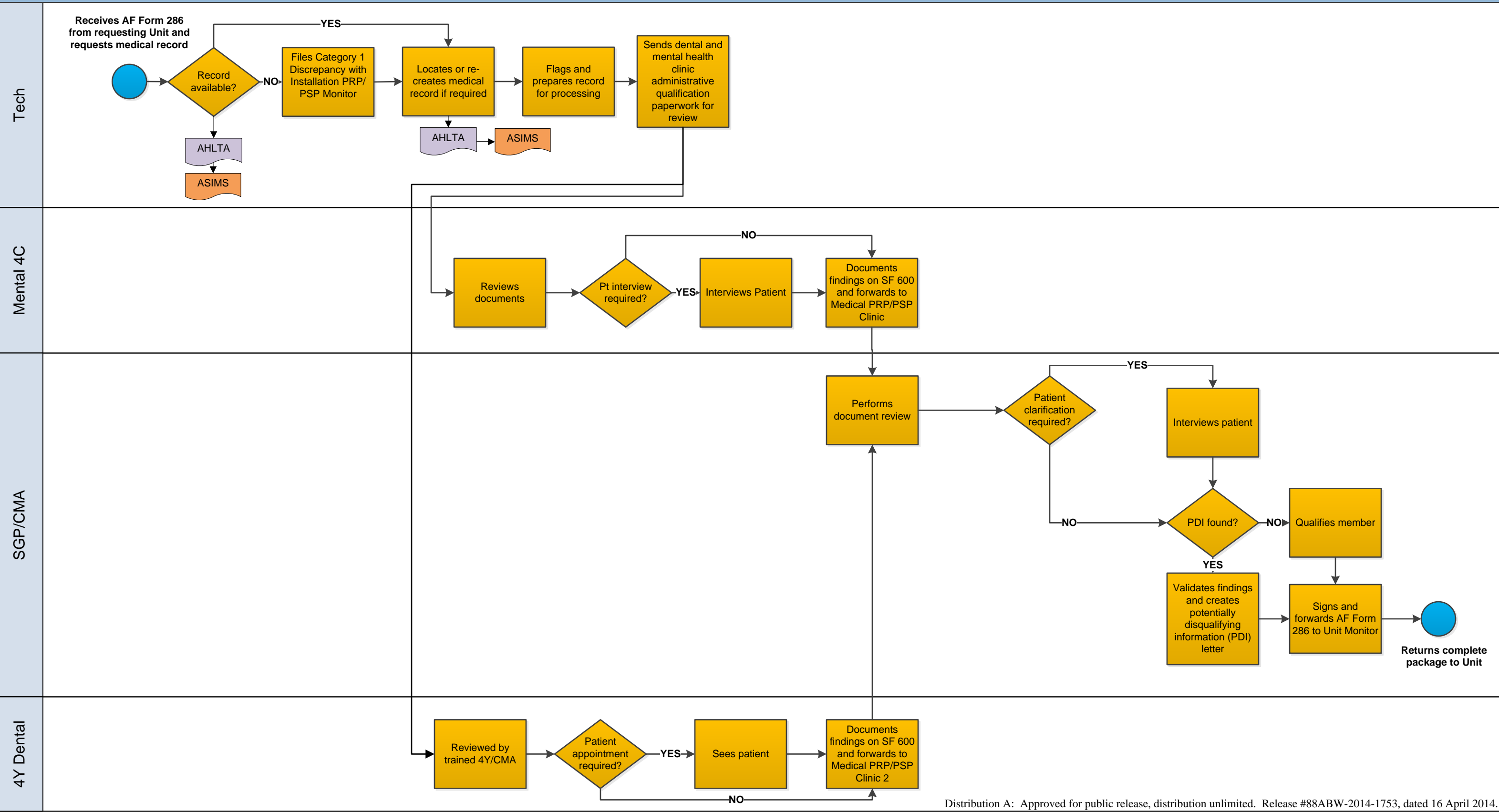


Observed Current Profile 469 Process





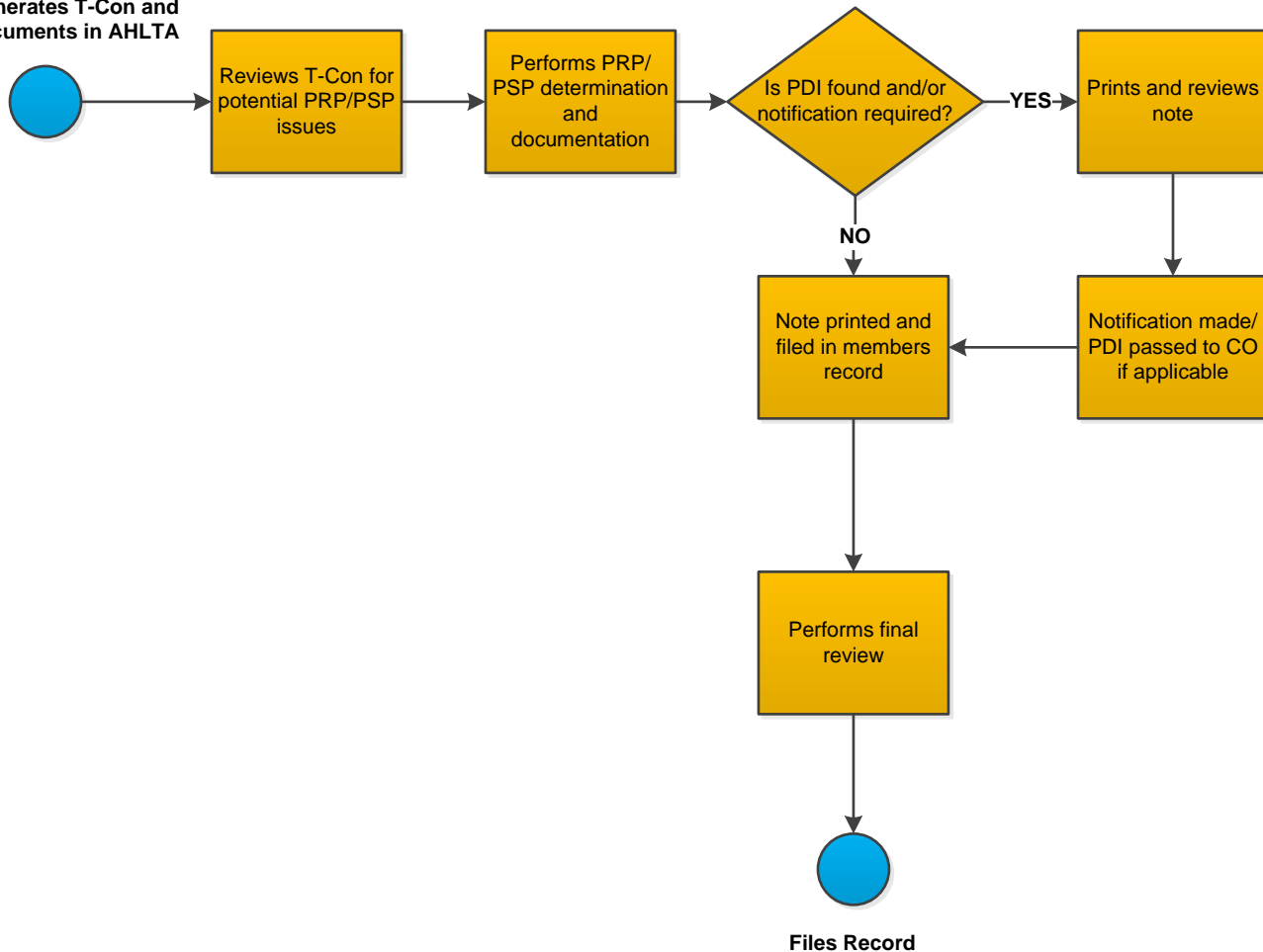
Observed Current - Personnel Reliability Program (PRP) – Certification/Administrative Qualification



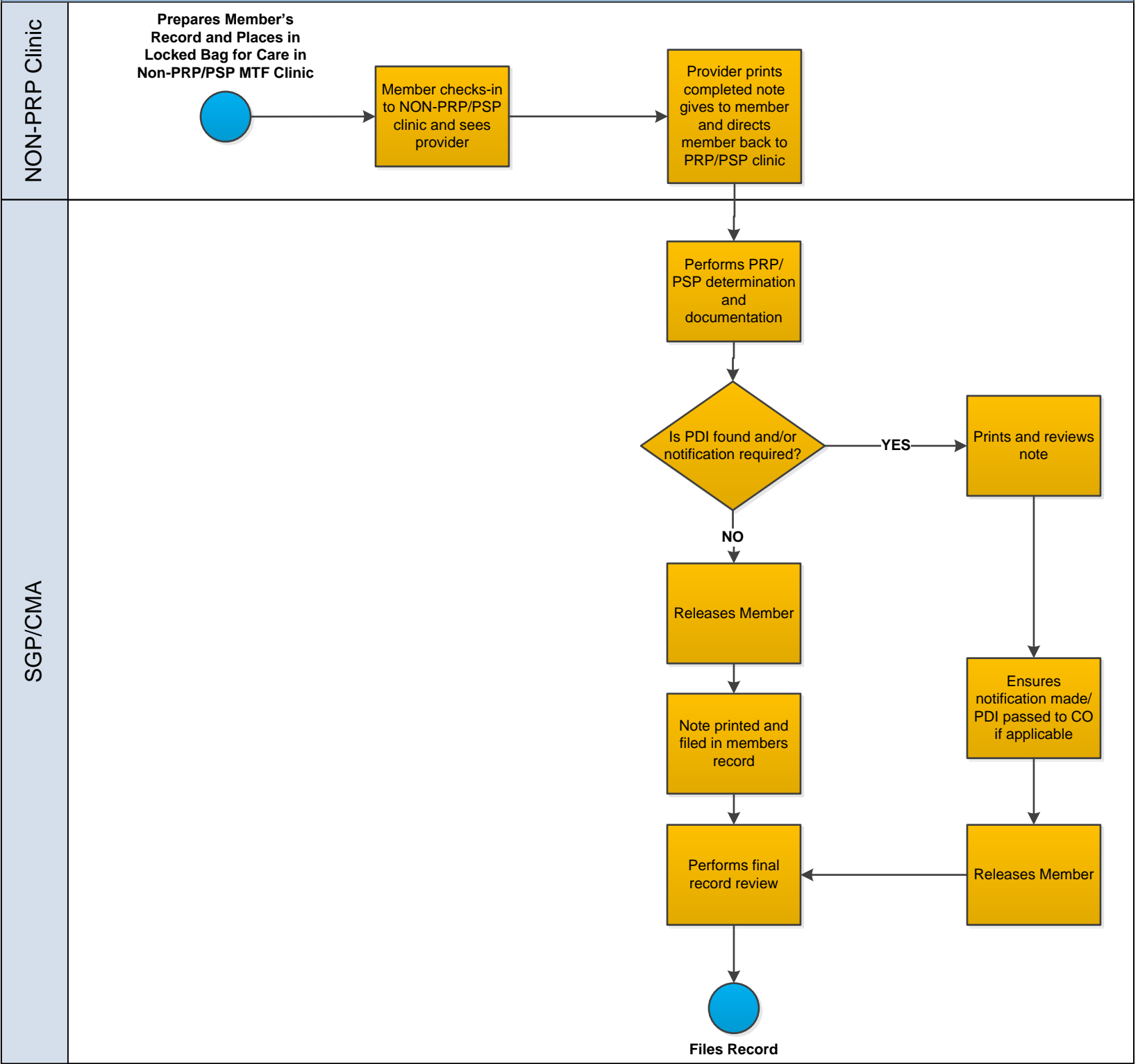
Observed Current - Personnel Reliability Program (PRP) – Telephone Consults

SGP/CMA

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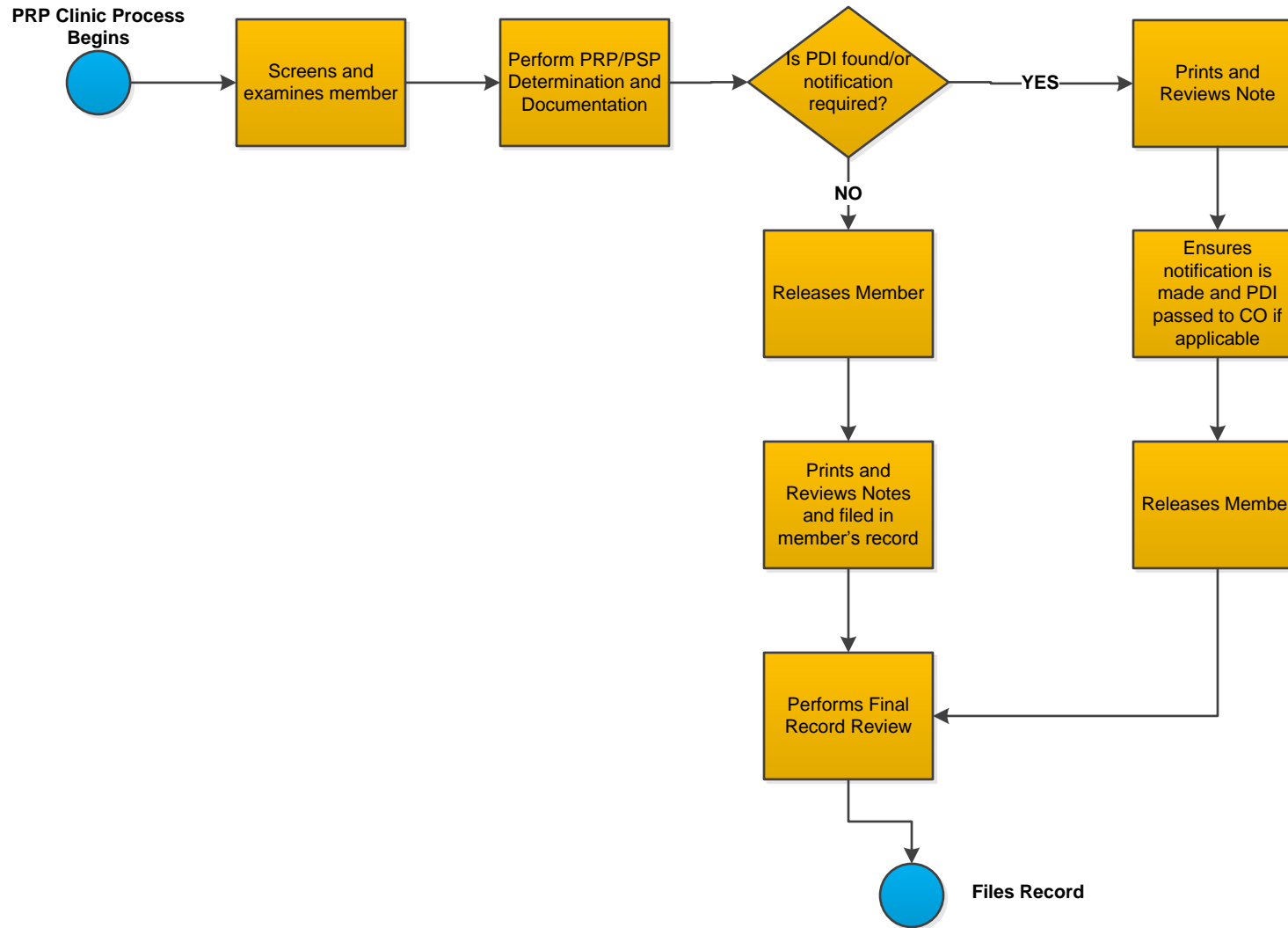


Observed Current - Personnel Reliability Program (PRP) – Medical Care within NON-PRP/PSP MTF Clinic



Observed Current - Personnel Reliability Program (PRP) – Medical Care within PRP/PSP Clinic

SGP/CMA



Observed Current - Personnel Reliability Program (PRP) – PHA Review

